D&T PROGRESSION OF KEY SKILLS KEY STAGE ONE

	YEAR ONE	YEAR TWO
DESIGN AND DEVELOP	**Designing – Understanding contexts, users and purposes** **As Designers, we are learning to:** - using a range of ideas from stories, home, school, gardens, playgrounds, local community, industry and the wider environment - talk about the products we are making - say whether our products are for ourselves or other users - describe what our products are for, with support - say how our products will work using a word bank to help us - say how we will make our products suitable for their intended users - use simple design criteria to help develop our ideas **Designing - Generating, developing, modelling and communicating ideas** **As Designers, we are learning to:** - begin to generate ideas by drawing on our own experiences - use knowledge of existing products to help come up with ideas - begin to develop and communicate ideas by talking and drawing - model ideas by exploring materials, components and construction kits and templates - use ICT, where appropriate, to develop and communicate our ideas - design purposeful, functional, appealing products for ourselves and other users based on design criteria **Evaluating- Existing products** **As Designers, we are learning to:** - begin to explore what products are and who or what they are for - begin to explore how products work and where they might be used - begin to explore what materials products are made from - begin to explore what we like and dislike about products	**Designing – Understanding contexts, users and purposes** **As Designers, we are learning to:** - work confidently using a range of ideas, such as imaginary, story based, home, school, gardens, playgrounds, local community, industry and the wider environment - say whether our products are for ourselves or other users - describe what our products are for - explain how our products will work - say how they will make our products suitable for their intended users - use simple design criteria to help develop our ideas **Designing - Generating, developing, modelling and communicating ideas** **As Designers, we are learning to:** - generate ideas by drawing on our own experiences - use knowledge of existing products to help come up with ideas - develop and communicate ideas by talking and drawing - model ideas by exploring materials, components and construction kits and by making templates and mock-ups - use ICT, where appropriate, to develop and communicate our ideas - design purposeful, functional, appealing products for ourselves and other users based on design criteria **Evaluating- Existing products** **As Designers, we are learning to:** - explore what products are and who or what they are for - explore how products work and how or where they might be used - explore what materials products are made from - explore what we like and dislike about products

	YEAR ONE	**YEAR TWO**
	As Designers, we are learning to:	**As Designers, we are learning to:**
TECHNICAL KNOWLEDGE – Making Products Work	- talk about the simple properties of materials and different parts that are used in the product - explore the movement of simple mechanisms such as wheels and axles - assemble a 3-D textiles product from two identical fabric shape - combine food ingredients according to their taste, small, appearance and texture - begin to use the correct technical vocabulary for the projects we are undertaking	- talk about the simple working characteristics of materials and components - explore the movement of simple mechanisms such as pop ups, levers and sliders/ linkages - investigate how freestanding structures can be made stronger, stiffer and more stable - assemble a 3-D textiles product from two identical fabric shape - combine food ingredients according to their taste, small, appearance and texture - use the correct technical vocabulary for the projects we are undertaking
PLANNING – Being Creative	- plan by suggesting what to do next - select from a range of tools and equipment, explaining our choices - select from a range of materials and components according to their characteristics, with support - consider how materials will be joined as part of our design	- plan by suggesting what to do next - select from a range of tools and equipment, explaining our choices - select from a range of materials and components according to their characteristics - consider how materials will be joined as part of our design - plan how procedures for safety and hygiene will be followed during the making process
MAKING – Practical Skills and Techniques	- follow procedures for safety and hygiene - use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components - measure, mark out, cut and shape materials and components, with support - decorate our product, including techniques from art and design - use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] - assemble, join and combine material - explore and use mechanisms [for example, wheels and axles], in our products	- follow procedures for safety and hygiene - use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components - measure, mark out, cut and shape materials and components - assemble, join and combine materials and components - use finishing techniques, including those from art and design - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] - assemble, join and combine material - build structures, exploring how they can be made stronger, stiffer and more stable - explore and use mechanisms [for example, levers, sliders], in our products

	YEAR ONE	**YEAR TWO**
	As Designers, we are learning to:	**As Designers, we are learning to:**
CONSTRUCTION	- select materials that will provide a strong, robust frame - measure, mark out and cut out materials with growing accuracy, using a ruler, scissors and a saw - select materials to join wood and card securely - learn how to assemble and join the wheels and axle - attach the axles to the chassis - select materials to join the chassis and body of the vehicle securely - use different materials and finishes to decorate the vehicle construction	- select materials that will provide a strong, robust container - measure, mark out and cut out materials with growing accuracy, using a ruler and scissors - use a net to construct a container or package - select materials to join plastic, fabric, wood and card securely - learn how to assemble and join different materials together - select materials to join the packaging together - use different materials and finishes to decorate the packaging
USING TEXTILES	- use a simple running stitch and learn about different types of stitches - practise sewing two small pieces of fabric together, demonstrating the use of, and need for, seam allowances. - create and use a paper pattern using 2-D shapes - talk about whether fabrics are suitable for the chosen purpose and user - explore a range of decorative finishing techniques e.g. appliqué, embroidery, fabric pens/paints, printing - use questioning to develop understanding e.g. How are we going to join the fabric together? How can we decorate the fabric? Which fabric would be the most suitable?	- use a range of stitches - practise sewing two small pieces of fabric together, demonstrating the use of, and need for, seam allowances - use a textile product we have taken apart to create a paper pattern using 2-D shapes - consider whether fabrics are suitable for the chosen purpose and user - explore a range of decorative finishing techniques e.g. appliqué, embroidery, fabric pens/paints, printing. - use questioning to develop understanding e.g. Which joining technique makes the strongest seam? Why? Which stitch is appropriate for the purpose? Which joining techniques are suitable for the fabric and purpose? How can you stiffen your fabric? What is the purpose of the fastenings? Which one is most suited to the purpose and user? What decorative techniques have been used? What effect do they have?
COOKING AND NUTRITION	- understand that all food comes from plants or animals - describe how food has to be grown, farmed or caught - name and sort given foods into the five groups in The Eatwell Plate - explain that we should eat at least five portions of fruit and vegetables every day - prepare simple dishes safely and hygienically, without using a heat source - use techniques such as cutting and peeling	- understand where food comes from - explain that all food comes from plants or animals - describe how food has to be farmed, grown elsewhere (e.g. home) or caught - name and sort foods into the five groups in The Eatwell Plate - explain that we should eat at least five portions of fruit and vegetables every day - prepare simple dishes safely and hygienically, without using a heat source

	- talk about basic food hygiene practices when handling food e.g. What should we do before we work with food? Why is following instructions important? - use simple utensils and practise skills such as washing, peeling, slicing, squeezing, pouring, stirring	- use techniques such as cutting, peeling and grating - talk about basic food hygiene practices when handling food e.g. What should we do before we work with food? Why is following instructions important? - use simple utensils and practise skills such as washing, grating, peeling, slicing, squeezing, pouring, stirring
EVALUATING	- talk about our design ideas and what we are making - make simple judgements about our products and ideas using design criteria and prompts to help us - suggest how our products could be improved – identifying which elements we would do better in the future by answering questions - alter and adapt original plans following discussion and evaluation - recognise what has gone well, and suggest further improvements for the finished article using questions to help us - identify where evaluation has led to improvements, with support - explore and evaluate a range of existing products using prompt sheets	- talk about our design ideas and what we are making - make simple judgements about our products and ideas against design criteria - evaluate our ideas and products against design criteria - suggest how our products could be improved – identifying which elements we would do better in the future - be clear about our ideas when asked - alter and adapt original plans following discussion and evaluation - recognise what has gone well, and suggest further improvements for the finished article - identify where evaluation has led to improvements - explore and evaluate a range of existing products
AREAS OF STUDY	Construction – design, make and evaluate vehicles using wheels and axles / Structures and homes – wacky windmills Textiles – design, make and evaluate a bag Cooking and nutrition – design, make and evaluate a fruit salad	Packaging – design, make and evaluate a package for an Admiral of the Sea medal Construction – design, make and evaluate a recyclable plant holder Textiles – design, make and evaluate a puppet, exploring pop up mechanisms, levers and linkages Cooking and nutrition – design, make and evaluate a pizza

D&T PROGRESSION OF KEY SKILLS LOWER KEY STAGE TWO

	YEAR THREE	YEAR FOUR
DESIGN AND DEVELOP	**Designing – Understanding contexts, users and purposes** **As Designers, we are learning to:** - begin to work with growing confidence within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment - describe the purpose of our products, with support - talk about the design features of our products that will appeal to intended users, using word banks to help us - explain how particular parts of our products work using word banks - develop our own design criteria and use these to inform our ideas **Designing - Generating, developing, modelling and communicating ideas** **As Designers, we are learning to:** - share and develop our ideas through discussion - model our ideas using prototypes and pattern pieces - show the order of working in plans using models, pictures and words - use computer-aided design to develop and communicate our ideas - generate realistic ideas through discussion, focusing on the needs of the user - make design decisions taking account of the availability of resources **Evaluating- Existing products** **As Designers, we are learning to:** - investigate and analyse a range of products to consider how well they have been designed and made - recognise that designs must meet a range of needs - analyse and question why materials have been chosen - explore which methods of construction have been used - investigate existing products and say why something will be useful - find out who designed and made known products - investigate where and when products were designed and made - consider whether products can be recycled or reused	**Designing – Understanding contexts, users and purposes** **As Designers, we are learning to:** - increase our confidence working within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment - describe the purpose of our products using prompts to help us - indicate the design features of our products that appeal to intended users - explain how particular parts of our products work - gather information about needs and wants of intended users - develop our own design criteria and use these to inform our ideas **Designing - Generating, developing, modelling and communicating ideas** **As Designers, we are learning to:** - share and clarify ideas through discussion - model our ideas using prototypes and pattern pieces - use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate our ideas - use computer-aided design to develop and communicate our ideas - generate realistic ideas, focusing on the needs of the user - make design decisions that take account of the availability of resources **Evaluating- Existing products** **As Designers, we are learning to:** - investigate and analyse a range of products to consider how well they have been designed and made - recognise that designs must meet a range of needs - analyse and question why materials have been chosen - explore which methods of construction have been used - investigate existing products and say why something will be useful - find out who designed and made known products - investigate where and when products were designed and made - consider whether products can be recycled or reused

	- find out about inventors, designers, engineers, chefs and manufacturers who have helped shape the world	- find out about inventors, designers, engineers, chefs and manufacturers who have helped shape the world
	YEAR THREE	**YEAR FOUR**
	As Designers, we are learning to:	**As Designers, we are learning to:**
TECHNICAL KNOWLEDGE – Making Products Work	- use learning from science and maths to help design and make products that work - use the correct technical vocabulary for the projects they are undertaking, using a word bank to help us - understand that a single fabric shape can be used to make a 3D textiles product - investigate that materials have both functional properties and aesthetic qualities - explore how materials can be combined and mixed to create more useful characteristics - explore different ways to strengthen, stiffen and reinforce more complex structures	- use learning from science and maths to help design and make products that work - explain how simple electrical circuits and components can be used to create functional products - understand that mechanical and electrical systems have an input, process and output - use the correct technical vocabulary for the projects they are undertaking - understand and use electrical systems in our product [for example, series circuits incorporating switches, bulbs, buzzers and motors] - program a computer to monitor and control our product - explain that materials have both functional properties and aesthetic qualities - explain that materials can be combined and mixed to create more useful characteristics - apply our understanding of how to strengthen, stiffen and reinforce more complex structures
PLANNING – BEING CREATIVE	- talk about our ideas when asked - select tools and equipment suitable for the task and explain our choices - select materials and components suitable for the task from a given list - explain our choice of materials and components according to their properties and visual appearance - order the main stages of making - generate, develop, model and communicate our ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	- explain our ideas clearly when asked - explain our choice of tools and equipment in relation to the suitability, skills and techniques they will be using - select materials and components suitable for the task - explain our choice of materials and components according to functional properties and aesthetic qualities - order and explain the main stages of making - generate, develop, model and communicate our ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
MAKING – PRACTICAL SKILLS AND TECHNIQUES	- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately - choose tools and equipment which are appropriate for the job - follow given procedures for safety and hygiene	- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately - choose tools and equipment which are appropriate for the job - explain and follow procedures for safety and hygiene

	- use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components - measure, mark out, cut and shape materials and components with some accuracy - prepare for work by assembling components together before joining - assemble, join and combine materials and components with some accuracy - apply a range of finishing techniques, including those from art and design, with some accuracy - make the finished product neat and tidy	- use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components - measure, mark out, cut and shape materials and components with increasing accuracy - prepare for work by assembling components together before joining - assemble, join and combine materials and components with increasing accuracy - alter and adapt materials to make them stronger - apply a range of finishing techniques, including those from art and design, with increasing accuracy - make the finished product neat and tidy
	As Designers, we are learning to:	**As Designers, we are learning to:**
CONSTRUCTION	- measure, mark out and cut out materials with growing accuracy, using a ruler and scissors - measure, mark out and cut materials using centimetres - select materials to join plastic, fabric, wood and card securely, from a given list - assemble and select materials to join different components together - combine a number of components together in different ways - alter and adapt materials to make them stronger	- measure, mark out and cut out materials with growing accuracy, using a ruler and scissors - measure, mark out and cut materials using millimetres - select materials to join plastic, fabric, wood and card securely - assemble and select materials to join different components together - combine a number of components together in different ways - alter and adapt materials to make them stronger
EXPLORING DIFFERENT MATERIALS	**USING TEXTILES** - practise a range of stitching techniques - practise sewing two small pieces of fabric together, demonstrating the use of, and need for, seam allowances. - use a textile product we have taken apart to create a paper pattern using 2-D shapes. - consider whether fabrics are suitable for the chosen purpose and user. - explore a range of decorative finishing techniques e.g. appliqué, embroidery, fabric pens/paints, printing. - use questioning to develop understanding e.g. Which joining technique makes the strongest seam? Why? Which stitch is appropriate for the purpose? Which joining techniques are suitable for the fabric and purpose? How can you stiffen your fabric? What is the purpose of the fastenings? Which one is most suited to the purpose and user?	**EXPLORING ELECTRICAL SYSTEMS, CIRCUITS AND SWITCHES** - demonstrate how to find a fault in a simple circuit and correct it, giving pupils opportunities to practise. - use a simple computer control program with an interface box or standalone control box to physically control output devices e.g. bulbs and buzzers. - make a variety of switches by using simple classroom materials e.g. card, corrugated plastic, aluminium foil, paper fasteners and paper clips. - make switches that operate in different ways e.g. when you press them, when you turn them, when you push them from side to side. - test their switches in a simple series circuit. - understand how to avoid making short circuits. - develop a design brief with the children within a context which is authentic and meaningful. - understand the purpose of the battery-powered products that they will be designing and making and who they will be for.

	What decorative techniques have been used? What effect do they have?	
COOKING AND NUTRITION	- begin to research how food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world - how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source - practise food preparation and cooking techniques by making a food product using an existing recipe - how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking - explain that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate - be active and healthy - explain that food and drink are needed to provide energy for the body - understand and explain the principles of a healthy and varied diet	- continue to research how food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world - how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source - how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking - explain that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate - be active and healthy, food and drink are needed to provide energy for the body - understand and apply the principles of a healthy and varied diet - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed - evaluate food by taste, texture, flavour etc.
EVALUATING	- evaluate our ideas and products against our design criteria and consider the views of others to improve our work - alter and adapt original plans following discussion and evaluation - recognise what has gone well, and begin to suggest further improvements for the finished article - suggest which elements we would do better in the future, with support - begin to identify where evaluation has led to improvements - explain how well products work to achieve their purposes - explain how well products meet user needs and wants	- evaluate our ideas and products against our design criteria and consider the views of others to improve our work - explain how we can alter and adapt original plans following discussion and evaluation - recognise what has gone well, but suggest further improvements for the finished article - suggest which elements we would do better in the future - identify where evaluation has led to improvements - explain how well products work to achieve their purposes - explain how well products meet user needs and wants
AREAS OF STUDY	Textiles – design, make and evaluate an Egyptian collar Cooking and Nutrition – design, make and evaluate bread (comparing Roman bread to present day recipes) Construction – design, make and evaluate an Anglo settlement	Construction - a shelter for a rainforest from natural materials Electrical systems, circuits and switches – design, make and evaluate a circuit Cooking and Nutrition – design, make and evaluate a Tudor recipe

D&T PROGRESSION OF KEY SKILLS UPPER KEY STAGE TWO

	YEAR FIVE	YEAR SIX
DESIGN AND DEVELOP	**Designing – Understanding contexts, users and purposes** **As Designers, we are learning to:** - work with growing confidence within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment - describe the purpose of our products with increasing confidence, in discussion and in writing - begin to recognise the design features of our products that will appeal to intended users in our writing - talk about how particular parts of our products work - carry out research, using surveys, interviews, questionnaires and web-based resources - begin to identify the needs, wants, preferences and values of particular individuals and groups - develop a simple design specification to guide our thinking, using **Designing - Generating, developing, modelling and communicating ideas** **As Designers, we are learning to:** - share and clarify ideas through discussion - model our ideas using prototypes and pattern pieces, with support - use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate our ideas - use computer-aided design to develop and communicate our ideas - generate realistic ideas, focusing on the needs of the user	**Designing – Understanding contexts, users and purposes** **As Designers, we are learning to:** - work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment - confidently describe the purpose of our products and record our ideas in writing - indicate the design features of our products that will appeal to intended users in our writing - record how particular parts of our products work using a range of formats - carry out research, using surveys, interviews, questionnaires and web-based resources - identify the needs, wants, preferences and values of particular individuals and groups - develop a simple design specification to guide our thinking **Designing - Generating, developing, modelling and communicating ideas** **As Designers, we are learning to:** - share and clarify ideas through discussion and detailed explanations - model our ideas using prototypes and pattern pieces - select and use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate our ideas - use computer-aided design to develop and communicate our ideas - generate realistic ideas, focusing on the needs of the user - make design decisions that take account of the availability of resources

	- make design decisions that take account of the availability of resources **Evaluating- Existing products** **As Designers, we are learning to:** - begin to analyse how well products have been designed and made - investigate why materials have been chosen - find out what methods of construction have been used - begin to analyse how well products work to achieve their purposes - analyse how well products meet user needs and wants - investigate how much products cost to make - begin to discuss and analyse how innovative products are - begin to consider how sustainable the materials in products are - start to question what impact products have beyond their intended purpose - continue to learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products	**Evaluating- Existing products** **As Designers, we are learning to:** - analyse how well products have been designed and made - investigate why materials have been chosen - explore what methods of construction have been used - analyse how well products work to achieve their purposes - analyse how well products meet user needs and wants - investigate how much products cost to make - analyse how innovative products are - explore how sustainable the materials in products are - question what impact products have beyond their intended purpose - continue to learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
TECHNICAL KNOWLEDGE – Making Products Work	- use learning from science and maths to help design and make products that work - understand that materials have both functional properties and aesthetic qualities - explain that materials can be combined and mixed to create more useful characteristics - explain that mechanical and electrical systems have an input, process and output - confidently use the correct technical vocabulary for the projects they are undertaking - describe how mechanical systems such as cams or pulleys or gears create movement - explain how more complex electrical circuits and components can be used to create - investigate how well products have been designed and made - analyse why materials have been chosen	- use learning from science and maths to help design and make products that work - understand that materials have both functional properties and aesthetic qualities - explain that materials can be combined and mixed to create more useful characteristics - explain that mechanical and electrical systems have an input, process and output - confidently use the correct technical vocabulary for the projects they are undertaking - describe how mechanical systems such as cams or pulleys or gears create movement - explain how more complex electrical circuits and components can be used to create - investigate how well products have been designed and made - analyse why materials have been chosen

	- investigate what methods of construction have been used - analyse how well products work to achieve their purposes - investigate how well products meet user needs and wants - investigate how much products cost to make - explore how innovative products are - find out how sustainable the materials in products are - question what impact products have beyond their intended purpose - find out about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products functional products - program a computer to monitor changes in the environment and control our products - reinforce and strengthen a 3D framework - understand that a 3D textiles product can be made from a combination of fabric shapes - understand that a recipe can be adapted by adding or substituting one or more ingredients	- investigate what methods of construction have been used - analyse how well products work to achieve their purposes - investigate how well products meet user needs and wants - investigate how much products cost to make - explore how innovative products are - find out how sustainable the materials in products are - question what impact products have beyond their intended purpose - find out about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products functional products - program a computer to monitor changes in the environment and control our products - reinforce and strengthen a 3D framework - understand that a 3D textiles product can be made from a combination of fabric shapes - understand that a recipe can be adapted by adding or substituting one or more ingredients
PLANNING – BEING CREATIVE	- select tools and equipment suitable for the task - explain our choice of tools and equipment in relation to the skills and techniques we will be using - select materials and components suitable for the task - explain their choice of materials and components according to functional properties and aesthetic qualities - produce appropriate lists of tools, equipment and materials that they need - formulate step-by-step plans as a guide to making	- select tools and equipment suitable for the task - explain our choice of tools and equipment in relation to the skills and techniques we will be using - select materials and components suitable for the task - explain their choice of materials and components according to functional properties and aesthetic qualities - produce appropriate lists of tools, equipment and materials that they need - formulate step-by-step plans as a guide to making
MAKING – PRACTICAL SKILLS AND TECHNIQUES	- follow procedures for safety and hygiene - use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components - measure, mark out, cut and shape materials and components with increasing accuracy - assemble, join and combine materials and components with increasing accuracy - apply a range of finishing techniques, including those from art and design with increasing accuracy	- continue to follow procedures for safety and hygiene - continue to use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components - accurately measure, mark out, cut and shape materials and components - accurately assemble, join and combine materials and components - accurately apply a range of finishing techniques, including those from art and design - continue to use techniques that involve a number of steps

	- continue to use techniques that involve a number of steps - demonstrate resourcefulness when tackling practical problems	- demonstrate resourcefulness when tackling practical problems
CONSTRUCTION	- measure, mark out and cut out materials with growing accuracy, using a ruler and scissors - measure, mark out and cut materials using millimetres - select materials to join plastic, fabric, wood and card securely - assemble and select materials to join different components together - combine a number of components together in different ways - alter and adapt materials to make them stronger	
EXPLORING DIFFERENT MATERIALS	**USING TEXTILES** - confidently use a range of stitching techniques - accurately sew two small pieces of fabric together, demonstrating the use of, and need for, seam allowances - use a textile product we have taken apart to create a paper pattern using 2-D shapes - explain why specific fabrics are suitable for the chosen purpose and user - confidently use a range of decorative finishing techniques e.g. appliqué, embroidery, fabric pens/paints, printing. - explore and explain our understanding e.g. Which joining technique makes the strongest seam? Why? Which stitch is appropriate for the purpose? Which joining techniques are suitable for the fabric and purpose? How can you stiffen your fabric? What is the purpose of the fastenings? Which one is most suited to the purpose and user? What decorative techniques have been used? What effect do they have?	**EXPLORING ELECTRICAL SYSTEMS, CIRCUITS AND SWITCHES** - demonstrate how to find a fault in a simple circuit and correct it, giving pupils opportunities to practise. - use a computer control program with an interface box or standalone control box to physically control output devices e.g. bulbs and buzzers - make and use a variety circuits to physically control output devices - test and use switches that control output devices - explain how to avoid making short circuits - develop a design brief with the children within a context which is authentic and meaningful - explain the purpose of the battery-powered products that we are designing and making and who they will be for
COOKING AND NUTRITION	- explain that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world - begin to learn that seasons may affect the food available - understand that the different seasons can affect which food is grown - begin to research how food is processed into ingredients that can be eaten or used in cooking	- explain that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world - explain why seasons may affect the food available - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed - explain how food is processed into ingredients that can be eaten or used in cooking

	- prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source - use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking - begin to explore how recipes can be adapted to change the appearance, taste, texture and aroma - find out how different food and drink contain different substances – nutrients, water and fibre – that are needed for health	- prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source - use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking - explore how recipes can be adapted to change the appearance, taste, texture and aroma - find out how different food and drink contain different substances – nutrients, water and fibre – that are needed for health
EVALUATING	- beginning to identify the strengths and areas for development in our ideas and products - consider the views of others, including intended users, to improve our work, with support - critically evaluate the quality of the design, manufacture and fitness for purpose of our products as they design and make - evaluate our ideas and products against our original design specification	- identify the strengths and areas for development in our ideas and products - consider the views of others, including intended users, to improve our work - critically evaluate the quality of the design, manufacture and fitness for purpose of our products as they design and make - evaluate our ideas and products against our original design specification
AREAS OF STUDY	Textiles – design, make and evaluate a Christmas decoration Cooking and Nutrition – design, make and evaluate a tortilla wrap (South American cooking) Construction – design, make and evaluate a moving toy (wooden construction using cams, gears or pulleys)	Electrical systems, circuits and switches – design circuits to control output devices e.g. buzzers, lights, motors Textile – design, make and evaluate Greek costumes Cooking and Nutrition – design, make and evaluate Greek recipes